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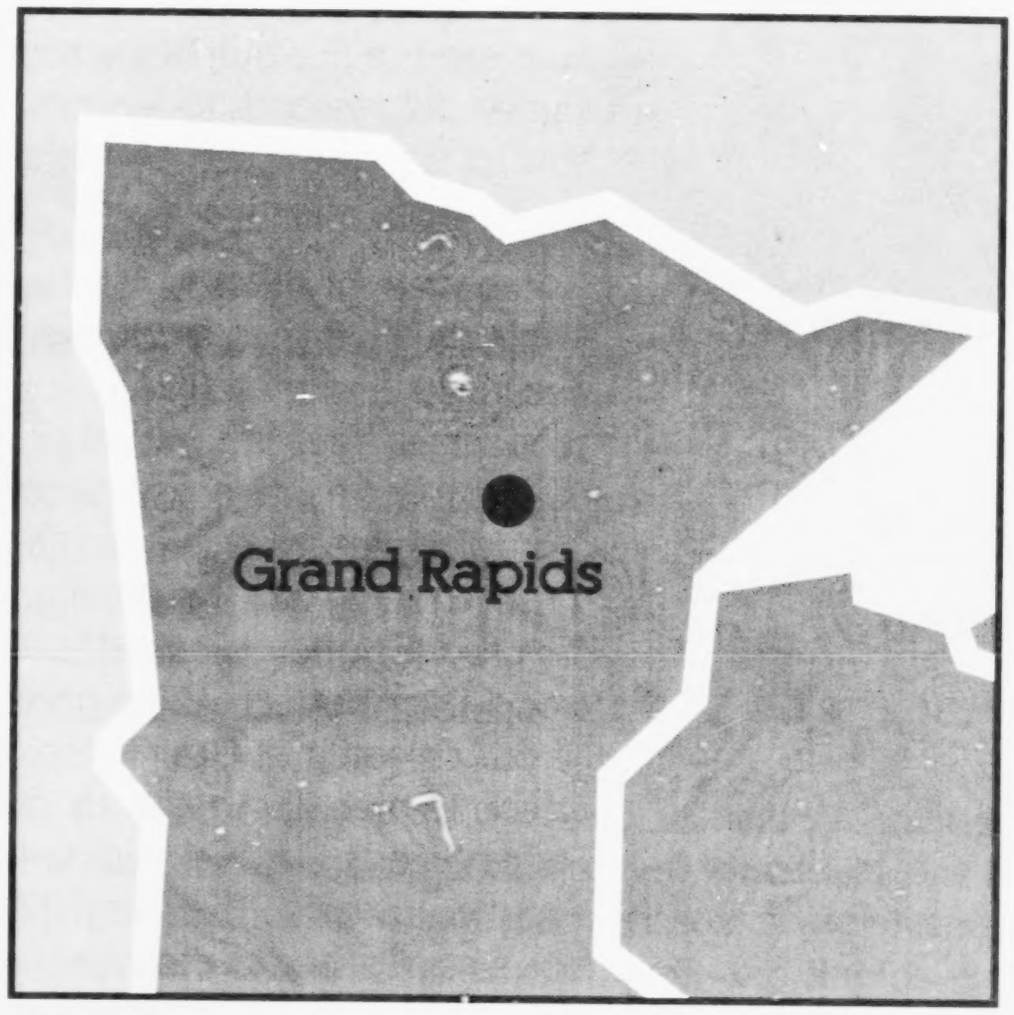
FORESTRY SCIENCES LABORATORY

GRAND RAPIDS, MINNESOTA



NORTH CENTRAL FOREST EXPERIMENT STATION

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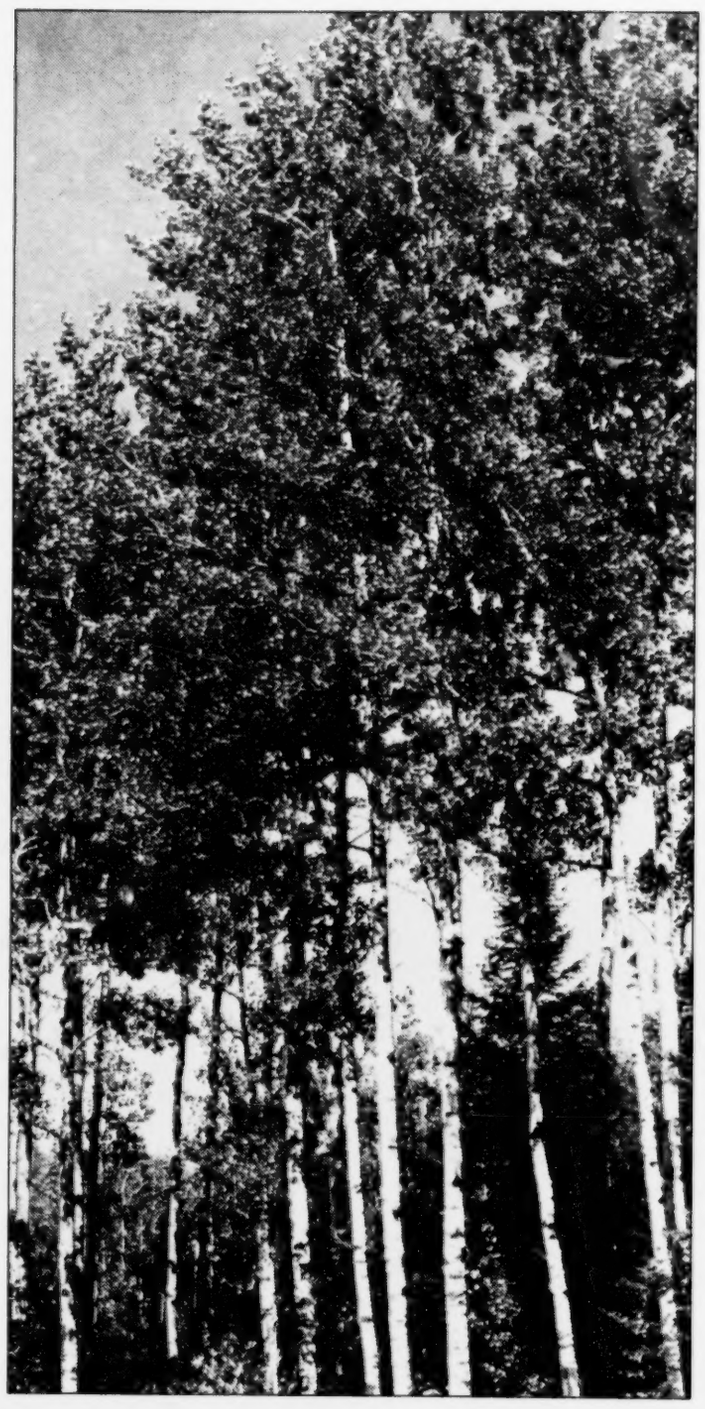
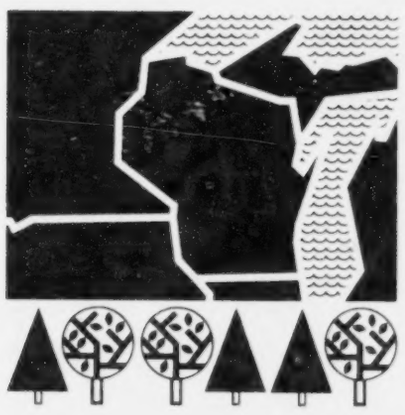
Forests cover 46 million acres in the Lake States, providing a vast resource of wildlife habitat, recreational opportunities, and wood fiber. The Forestry Sciences Laboratory in Grand Rapids, Minnesota, one of eight field units of the North Central Forest Experiment Station headquartered in St. Paul, Minnesota, carries out research to learn how to manage these northern forests more effectively.

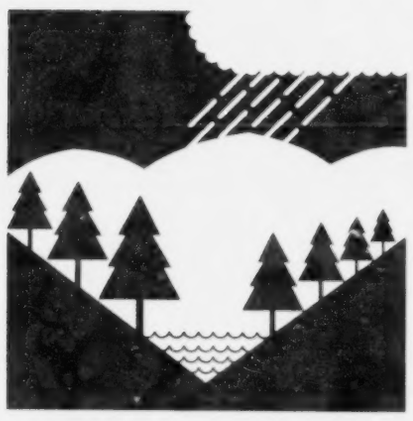


NORTHERN FOREST SILVICULTURE



As the amount of forest land available for timber production decreases and the demand for products increases, forest productivity will have to rise. Growing trees intensively — much like a farm crop — has the potential for producing large amounts of wood fiber per acre. One goal of our research at Grand Rapids is to develop ways of managing forests to meet the demands of a growing population. Lake States' forests provide wildlife habitat and the land base for expanding recreation. They also supply raw material for numerous sawmills, board plants, an expanding pulp and paper industry, and fuel — which alone accounts for half of all wood harvested. While meeting our fiber and recreation needs, we must protect soil productivity and address other environmental issues, such as possible climate change.

WATERSHED MANAGEMENT RESEARCH



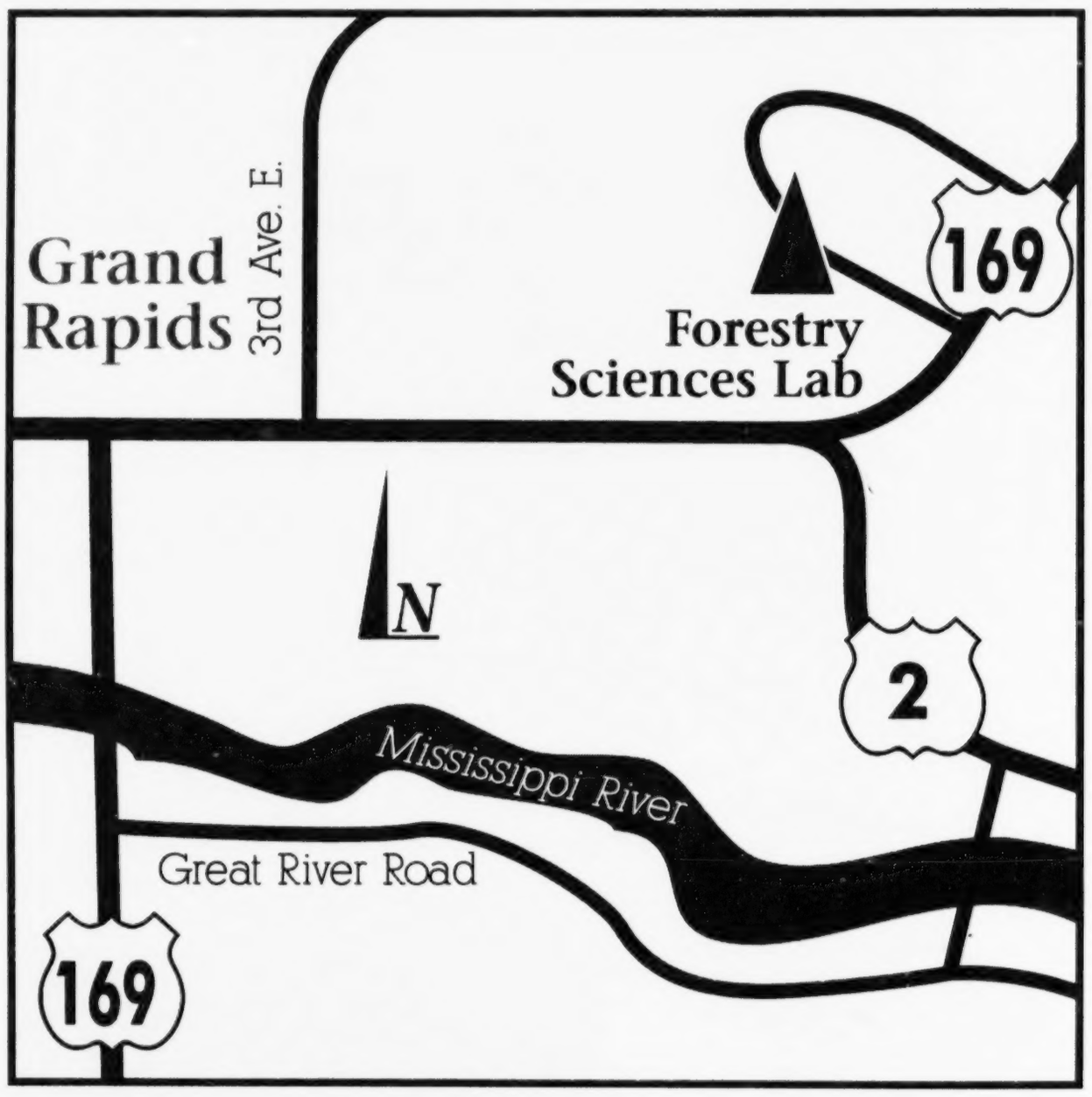
Our other goal is to determine how northern forests can be managed to maintain the quality and quantity of the water resource of the region. Northern forest watersheds are important sources of water, contributing to three great drainages of North America, the St. Lawrence River, the Hudson Bay, and the Mississippi River. Our watershed research focuses on determining the likely impacts of global change on the forests, soils, and waters of the northern Lake States. We also study the effects of forest uses and management practices on the quality and quantity of water yields.

Located with Itasca Community College and the University of Minnesota's North Central Experiment Station, the Forestry Sciences Laboratory has a library-conference room, greenhouse,

chemical analysis laboratories, and offices for a research staff of 20 people. Additional personnel are located at Rhinelander, Wisconsin. Field studies are conducted on five Experimental Forests, a research farm, plantations, forests, and lakes throughout the Lake States.

The Cutfoot, Pike Bay, and Big Falls Experimental Forests in Minnesota provide areas for pine, aspen, and lowland conifer research, respectively. Northern hardwood research is centered on the Argonne Experimental Forest in Wisconsin, and short-rotation hybrid poplar research is conducted on the Harshaw Forestry Research Farm by staff located at Rhinelander, Wisconsin. The Marcell Experimental Forest, a landscape mosaic of upland forests and peatlands located 30 miles north of Grand Rapids, is the site of climate, water, and forest health studies in Minnesota.

Forestry research near Grand Rapids has a long history. Field studies were first begun in 1912 to determine the effectiveness of forest harvesting methods. Research was expanded by what was then known as the Lake States Forest Experiment Station. Studies were carried on by scientists headquartered in St. Paul until 1946, when a laboratory was established in Grand Rapids. The Grand Rapids research staff occupied several facilities until the present office-laboratory building was constructed in 1959.



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